

BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA  
DOCKET NO. 2021-165-E - ORDER NO. 2021-658  
SEPTEMBER 29, 2021

IN RE: Michael Hochgraf, Complainant/Petitioner v.     ) ORDER RULING ON  
Dominion Energy South Carolina,                     ) COMPLAINT  
Incorporated, Defendant/Respondent                 )

**I. INTRODUCTION**

This matter comes before the Public Service Commission of South Carolina (“Commission”) on the Complaint of Michael Hochgraf (“Complainant”) against Dominion Energy South Carolina, Inc. (“DESC”), Respondent. Mr. Hochgraf alleges that the power being delivered to his residence by DESC is not reliable. Specifically, the Complainant seeks to have DESC “provide reliable [e]lectrical [s]ervice to my house that eliminates the historical problem whereby AFCI circuit breakers in my new house trip upon power failure and/or upon power restoration.”<sup>1</sup>

**II. FACTS AND PROCEDURAL HISTORY**

Mr. Hochgraf, appearing *pro se*, filed a Complaint with the Commission dated May 18, 2021. In his Complaint, Mr. Hochgraf alleges that, “the electrical power that Dominion Energy provides to my new house is not reliable. There is documented history detailing that Dominion’s electrical service...often causes the GFCI/AFCI (arc-fault) circuit breakers in my new house to trip upon power failure and/or upon power restoration.”<sup>2</sup>

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<sup>1</sup> Complaint dated 5/18/2021 at p. 1.

<sup>2</sup> Id.

DESC filed an Answer to the Complaint and the Direct Testimonies of DESC Witnesses Kimberly Eads and Richard Gilbert on June 14, 2021. Mr. Hochgraf filed a Reply with the Commission dated June 21, 2021.

The Office of Regulatory Staff (ORS), a party of record pursuant to Section 58-4-10 of the South Carolina Code of Laws (Supp. 2020), filed a Notice of Appearance on May 24, 2021. On June 14, 2021, ORS notified the Commission it did not intend to participate in the docket.

By letter dated May 20, 2021, the Clerk's Office of the Commission issued a Scheduling Notice ("Notice"). The Notice provided information regarding the nature of the proceeding and advised that a virtual hearing would be held on August 16, 2021. Direct testimony due date for DESC and ORS was scheduled for Monday, June 14, 2021, with the Complainant's Response due June 21, 2021.

The Commission held a public hearing on August 16, 2021, at 10:00 a.m., before a Hearing Examiner. The Complainant placed into evidence three exhibits and gave testimony from the stand. DESC Witnesses Eads and Gilbert offered one exhibit each to be entered into the record of the proceeding, and both gave direct testimony. At the conclusion of the proceeding, DESC made two motions: (1) a Motion to Dismiss, or in the alternative, (2) a Motion for Directed Verdict.

At its Business Meeting on September 1, 2021, the Commission -- having reviewed the entire record of evidence in the proceeding -- issued a Directive that (1) denied the outstanding motions for Dismissal or for a Directed Verdict; (2) ordered that DESC be required to provide all monitoring data incident to Mr. Hochgraf's Complaint to Mr.

Hochgraf in a meaningful, understandable format; (3) found that DESC is delivering power to Mr. Hochgraf consistent with rules, regulations, and statutes which govern its operation; and 4) found that DESC is not in violation of any rule, regulation, or statute.

### **III. EVIDENCE OF RECORD**

The Complainant provided direct testimony indicating that he had been having an issue regarding delivery of electric service to his home, which manifested specifically when a power interruption would occur. Particularly, Mr. Hochgraf testifies that when his power is interrupted a number of breakers, so-called AFCI or arc fault breakers, would trip. The result of this being that, upon the occurrence of a power outage, Mr. Hochgraf would have to manually reset the breakers in his home.

Mr. Hochgraf offered into evidence a picture of his breakers in the “tripped” position. The picture, entered into the record as Hearing Exhibit 7, shows one-half of the breakers tripped, in an alternating pattern.

DESC Witness Eads testified that DESC installed a monitor to record the voltage at Mr. Hochgraf’s residence for two weeks from October 20, 2020, to November 2, 2020. Ms. Eads attached the findings of that monitoring period to her exhibit, entered into the record of the case as Hearing Exhibit 4. Witness Eads testified that the power monitor found the power delivered to Mr. Hochgraf to be within specs – which is within 10% of the standard average voltage at all times.

Mr. Hochgraf responded to DESC Witness Eads, stating that during the initial monitoring period, no interruption to his electrical service occurred. He testified that his

issue occurs during a power outage and the subsequent return of power – not during business-as-usual operations.

Witness Eads testified with an update during the presentation of her testimony pertaining to monitoring activities subsequent to the filing of her direct testimony:

Subsequent to the filing of my direct testimony, the company installed another monitor at Mr. Hochgraf's residence in an attempt to collect the data during a power outage, as he has requested. Those efforts were successful and the data collected was consistent with and representative of a typical profile expected to be seen from the response by an electric power system during and after a power outage, demonstrating again that the company's system is operating properly and that the company does not have a power supply problem before, during, or after a power outage at Mr. Hochgraf's residence.<sup>3</sup>

DESC Witness Gilbert testified that by industry standard reliability metrics, the power being delivered to Mr. Hochgraf's residence is stable and reliable. Witness Gilbert testified that breakers tripping during a power outage is "perfectly normal."<sup>4</sup>

#### **IV. APPLICABLE LAW**

##### **103–345. Complaints.**

Complaints concerning the charges, practices, facilities, or service of the electrical utility shall be investigated promptly, thoroughly, and professionally. The electrical utility shall keep such records of customer complaints to include the name and address of the complainant, the date and character of the complaint, and the adjustment or disposal made thereof as will enable it to review and analyze its procedures and actions.

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<sup>3</sup> Eads Direct Testimony Summary

<sup>4</sup> Gilbert Direct Prefiled Testimony at p. 6.

103–363. Adequacy of Service.

1. Operation of Electrical Utility.

A. Standard Frequency—Each electrical utility supplying alternating current shall adopt a standard frequency of 60 Hertz, suitability of which has been determined by the commission, and shall maintain this frequency within 15 seconds plus or minus of standard at all times during which service is supplied; provided, however, that momentary variations of frequency of more than fifteen seconds which are clearly due to no lack of proper equipment or reasonable care on the part of the electrical utility, shall not be construed a violation of this rule.

B. Standard Voltage—Each electrical utility shall adopt standard average voltage for its different classes of constant voltage service. This voltage maintained at the electrical utility mains shall at all times be reasonably constant, and the variations in voltage from the average shall in no case exceed the limitations as prescribed below.

The voltage variations for service should not exceed 10% above or below the standard average voltage.

**V. DISCUSSION**

During the hearing, it was undisputed that Mr. Hochgraf is experiencing a problematic and inconvenient circumstance with regard to his breakers tripping. However, from a technical perspective, it was clear that a AFCI may be tripped either via a supply-side (i.e. DESC-supplied) problem, or a load-side circumstance. It is clear from the record that AFCI breakers are a relatively new addition to the National Electric Code, and the devices themselves are – to some extent – still in a refinement phase. As DESC Witness Eads testified:

Arc Fault Circuit Interrupter (“AFCI”) breakers have circuitry that is designed to trip when it detects a change in the voltage waveform that resembles arcing due to a fault. **This**

**detection is not infallible at this time and can trip on arcing that is not related to a fault in the circuit.** AFCIs can trip on arcs that are generated by the appliances themselves and on electromagnetic interference generated by the appliances that can disrupt the proper operation of the AFCI circuitry.<sup>5</sup>

While it is undisputed that Mr. Hochgraf did experience frequent tripping of his AFCI breakers, DESC installed a monitoring device during two separate periods of time at Mr. Hochgraf's residence. With regard to the second installation, DESC Witness Eads testified that a power disruption occurred during the monitoring period, and data was collected during the event. It was disclosed during the proceeding that the monitoring information, while characterized as being demonstrative of proper electrical system operation, was not provided to Mr. Hochgraf.

Based on the testimony regarding the data gathered during the monitoring periods, DESC asserts that its system is operating properly and whatever difficulty Mr. Hochgraf may be experiencing, it is not due to a quality of service deficiency on behalf of DESC.

## **VI. FINDINGS OF FACT**

1. The AFCI breakers installed in Mr. Hochgraf's home are operating at a greater-than-expected frequency during power outages.
2. DESC installed a monitoring device on two separate occasions to record the supply-side power being delivered to Mr. Hochgraf's home.
3. The specific monitoring information collected by DESC during the second monitoring period was not disclosed to Mr. Hochgraf.

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<sup>5</sup> Eads Direct Prefiled Testimony at pp. 4-5. (emphasis added)

4. Notwithstanding lack of disclosure to Mr. Hochgraf, DESC was able to demonstrate that its power delivery is consistent with a properly functioning electrical system.

## **VII. CONCLUSIONS OF LAW**

1. The evidence of record in the proceeding does not convincingly establish that DESC is delivering electrical power in a manner or of a quality that presents a deficiency in quality of service.

2. DESC is operating its electrical system consistent with Regulation 103-363(B).

## **VIII. ORDERING PROVISIONS**

### **IT IS THEREFORE ORDERED:**

1. The outstanding Motion to Dismiss and Motion for Directed Verdict made by Dominion Energy South Carolina, Inc. are denied.

2. DESC shall provide, within 10 days of the issuance of this Order, all monitoring data collected incident to this Complaint to Mr. Hochgraf. The data should be presented in a format that is in a meaningful, understandable format.

3. DESC is found to not be in violation of any rule, regulation, or statute.

4. This Order shall remain in full force and effect until further order of the Commission.

BY ORDER OF THE COMMISSION:



Justin T. Williams, Chairman  
Public Service Commission of  
South Carolina